PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	ASCHOFF et al.	Examiner:	TSAL, S. J.
Serial No.:	10/672,423	Group Art Unit:	2186
Filed:	September 26, 2003	Docket No.:	**SJO920030019US1** (IBMS.069-0510)
Title:	METHOD, APPARATUS AND PROGRAM STORAGE DEVICE FOR PROVIDING AUTOMATIC PERFORMANCE OPTIMIZATION OF VIRTUALIZED STORAGE ALLOCATION WITHIN A NETWORK OF STORAGE ELEMENTS		

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence and the papers, as described hereinabove, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Mail Stop Appeal, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 12, 2007.

By: David W. Lynch

REPLY BRIEF

Mail Stop Appeal
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is a Reply Brief submitted pursuant to 37 C.F.R. § 41.41 for the above-referenced patent application.

The Examiner's Answer states on page 20, that the workload provider is an automated tool that correlates workload data to create workload profiles. On page 22, the Examiner's Answer states that Zahavi discloses that the size and number of disk array or other data storage systems is needed and requires information about space, traffic and a desired quality of service. Appellant agrees that the "Background" section of Zahavi recognizes this need.

However, Zahavi goes on to disclose a "computer-based tool for allocating storage." Appellant respectfully submits, that Zahavi, while meeting the goal of providing a "computer-based tool for allocating storage", fails to disclose a processor that is configured for providing storage to meet workload requirements of the user determined by the processor and to meet competing workload requirements based on the analysis of the system parameters.

It is clear from the specification of Zahavi, that the user provides the input to a "computer" for configuring and managing a storage system. Zahavi's contribution is providing a Workload Profiler that analyzes work performed on the dataset to determine a correlation between logical devices. The user then uses information provided by the Workload Profiler to configuring and managing a storage system.

For example, Zahavi discloses that the user provides input to select the storage profile. First the user directly indicates the minimum terabytes (TB) needed or desired (column 6, lines 49-50). The user also selects the number physical partitions per disk (column 6, lines 52-53). The user selects the protection scheme to be used, e.g., Raid-1, Raid-S, and Raid-0 (column 6, lines 57-58). The user selects the size and type of traffic (column 7, lines 13-15). The user defines the traffic requirements, i.e., IO's per second (column 7, lines 55-56).

The user must also provide information identifying what percent of work is Random-Read Hit, Random-Read Miss, Sequential Read and Write (column 8, lines 2-4). The user determines what portion of read activity is sequential (column 8, lines 14-15). The user enters the number of back-end director (column 10, lines 66-67). The user assigns drives to the back-end directors (column 11, lines 1-2). The user is further allowed to adjust space

requirements (column 8, lines 64-65). The user enters the number of front-end directors (column 11, lines 9-10). The user enters the number of ports (column 11, lines 10-11). The user selects the percentage of work that is incorporated into the profiling process (column 13, lines 136-38). The user selects the coefficient level (column 13, lines 54-55).

In contrast, the Workload Profiler and its Workload Analyzer merely correlates workload data on a storage system, as collected and saved by analyzing tool such as the ECC Workload Analyzer. The Workload Profiler and its Workload Analyzer are not further described as performing any additional functions, such as providing storage to meet workload requirements of the user determined by the processor and to meet competing workload requirements based on the analysis of the system parameters.

Further, Zahavi explicitly states that the "invention is directed to a configuration method and system for storage capacity planning based on user or administrator defined workload requirements" (column 4, lines 39-41).

Finally, the Examiner's Answer admits on page 22 that Zahavi merely presents information for advising a user how to configure a storage system. Thus, Zahavi does not include a processor configured to provide storage to meet workload requirements of the user determined by the processor and to meet competing workload requirements based on the analysis of the system parameters.

Accordingly, Appellants respectfully submit that the claims are patentable over Zahavi as described in Appellant's Appeal Brief and further discussed herein.

On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicant, David W. Lynch, at 423-757-0264.

Respectfully submitted,

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